AMENDMENTS TO THE CLAIMS

Please add or amend the claims to read as follows, and cancel without prejudice or disclaimer to resubmission in a divisional or continuation application claims indicated as cancelled:

1. (Currently Amended) A recombinant non-cytopathic ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV) comprising a nucleic acid encoding a ~~Rhabdoviral~~Vesicular Stomatitis Virus (VSV) genome wherein said ~~Rhabdoviral~~Vesicular Stomatitis Virus (VSV) genome comprises a deletion or a mutation within a region encoding a matrix (M) protein, wherein said M protein deletion or mutation results in a non-cytopathic ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV).

2. (Currently Amended) The recombinant non-cytopathic ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV) of claim 1, further comprising a deletion or a mutation within a region encoding a glycoprotein (G protein).

3. (Currently Amended) The recombinant non-cytopathic ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV) of claim 1, further comprising a regulatory element.

4. (Currently Amended) The recombinant non-cytopathic ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV) of claim 1, wherein said deletion or mutation is in a region encoding the N-terminal portion of said matrix protein.

5. (Currently Amended) The recombinant non-cytopathic ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV) of claim 4, wherein said deletion or mutation is in the region encoding [[a]] the nuclear localization sequence (NLS).

6. (Currently Amended) The recombinant non-cytopathic ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV) of claim 5, wherein said mutation encodes for the substitution of:

(a) An alanine amino acid residue for a methionine amino acid residue, at position 33 or 51 of the ~~Rhabdoviral~~Vesicular Stomatitis Virus (VSV) matrix protein; or

(b) A serine amino acid residue for a glycine amino acid residue, at position 226 of the ~~Rhabdoviral~~Vesicular Stomatitis Virus (VSV) matrix protein.

7. (Currently Amended) The recombinant non-cytopathic ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV) of claim 1, further comprising an insertion of a heterologous nucleic acid encoding a polypeptide.

8. (Currently Amended) The recombinant non-cytopathic ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV) of claim 7, wherein said polypeptide is a therapeutic polypeptide.

9. (Withdrawn and Currently Amended) The recombinant non-cytopathic ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV) of claim 7, wherein said polypeptide is immunogenic.

10. (Withdrawn and Currently Amended) The recombinant non-cytopathic ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV) of claim 1, further comprising an insertion of a heterologous nucleic acid encoding a marker polypeptide.

11. (Withdrawn and Currently Amended) The recombinant non-cytopathic ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV) of claim 10, wherein said marker polypeptide is green fluorescent protein (GFP), secreted alkaline phosphotase, DS-Red fluorescent protein, beta-galactosidase, or luciferase.

12. (Withdrawn and Currently Amended) The recombinant non-cytopathic ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV) of claim 1, further comprising an insertion of a heterologous nucleic acid encoding a suicide gene.

13. (Withdrawn and Currently Amended) The recombinant non-cytopathic ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV) of claim 1, further comprising an insertion of a heterologous nucleic acid encoding a cytokine gene.

14. (Withdrawn and Currently Amended) The recombinant non-cytopathic ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV) of claim 13, wherein said cytokine is interleukin 2, interleukin 4, interleukin 12 or interferon-γ.

15. (Currently Amended) The recombinant non-cytopathic ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV) of claim 1, further comprising a ~~Rhabdoviral~~Vesicular Stomatitis Virus (VSV) G stem polypeptide.

16. (Currently Amended) A vaccine comprising the recombinant non-cytopathic ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV) of claim 1.

17. (Cancelled)

18. (Cancelled) The recombinant non-cytopathic Rhabdovirus of claim 1, wherein said Rhabdoviral genome is a vesicular stomatitis virus (VSV) genome.

19. (Withdrawn and Currently Amended) A method of producing a non-cytopathic recombinant ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV) comprising a genetically modified nucleic acid encoding ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV) proteins including a deletion or a mutation within a matrix protein comprising the steps of: (A) inserting into a suitable cell a polynucleotide sequence encoding ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV) proteins including a deletion or a mutation within the matrix protein, a polynucleotide sequence encoding a marker polypeptide and

a polycistronic cDNA comprising at least the 3' and 5' ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV) leader and trailer regions containing the cis acting signals for ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV) replication; (B) culturing the cell under conditions that select for a noncytopathic phenotype of said cell; (C) culturing said cell under conditions that permit production of the recombinant ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV), and (D) isolating said non cytopathic recombinant ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV).

20. (Withdrawn and Currently Amended) The method of claim 19, wherein said non-cytopathic recombinant ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV) further comprises a heterologous nucleic acid sequence encoding a polypeptide.

21. (Withdrawn and Previously Presented) The method of claim 20, wherein said polypeptide is a therapeutic polypeptide.

22. (Withdrawn and Previously Presented) The method of claim 21, wherein said polypeptide is immunogenic.

23. (Withdrawn and Currently Amended) The method of claim 19, further comprising the step of isolating genomic RNA from said isolated non-cytopathic recombinant ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV).

24. (Withdrawn and Previously Presented) The method of claim 23, wherein said step of isolating genomic RNA is performed by using RT-PCR.

25. (Withdrawn and Previously Presented) The method of claim 19, wherein said suitable cell, being selected from the group consisting of rodent, primate and human cells.

26. (Withdrawn and Previously Presented) The method of claim 19, wherein said deletion or mutation is in a region encoding the N-terminal portion of said matrix protein.

27. (Withdrawn and Previously Presented) The method of claim 26, wherein said deletion or mutation is in the region encoding a nuclear localization sequence (NLS).

28. (Withdrawn and Previously Presented) The method of claim 19, wherein said mutation is an amino acid substitution of:

(a) An alanine amino acid residue for a methionine amino acid residue, at position 33 or 51; or

(b) A serine amino acid residue for a glycine amino acid residue, at position 226.

29. (Cancelled) The method of claim 19, wherein the non-cytopathic recombinant Rhabdovirus is a vesicular stomatitis virus (VSV).

30. (Currently Amended) An isolated nucleic acid molecule comprising a polynucleotide sequence encoding a genome of a non-cytopathic ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV), said polynucleotide sequence having a deletion or a mutation in a gene encoding a matrix (M) protein, wherein said M protein deletion or mutation results in a non-cytopathic ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV).

31. (Currently Amended) The isolated nucleic acid molecule of claim 30, wherein said ~~Rhabdoviral~~Vesicular Stomatitis Virus (VSV) genome further comprises a deletion or a mutation within the region encoding a glycoprotein (G protein).

32. (Original) The isolated nucleic acid molecule of claim 30, further comprising a regulatory element.

33. (Previously Presented) The isolated nucleic acid molecule of claim 30, wherein said deletion or mutation is in the region encoding the N-terminal portion of said matrix protein.

34. (Currently Amended) The isolated nucleic acid molecule of claim 33, wherein said deletion or mutation resides in the region encoding [[a]] the nuclear localization sequence (NLS).

35. (Currently Amended) The isolated nucleic acid molecule of claim 30, wherein said mutation encodes for the substitution of:

(a) An alanine amino acid residue for a methionine amino acid residue, at position 33 or 51 of the ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV) matrix protein; or

(b) A serine amino acid residue for a glycine amino acid residue, at position 226 of the ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV) matrix protein.

36. (Previously Presented) The isolated nucleic acid molecule of claim 30, further comprising an insertion of a heterologous nucleic acid sequence encoding a polypeptide.

37. (Previously Presented) The isolated nucleic acid molecule of claim 36, wherein said polypeptide is a therapeutic polypeptide.

38. (Withdrawn and Previously Presented) The isolated nucleic acid molecule of claim 36, wherein said polypeptide is immunogenic.

39. (Withdrawn and Previously Presented) The isolated nucleic acid molecule of claim 30, further comprising an insertion of a heterologous nucleic acid sequence encoding a marker polypeptide.

40. (Withdrawn and Previously Presented) The isolated nucleic acid molecule of claim 39, wherein said marker polypeptide is green fluorescent protein, secreted alkaline phosphotase, DS-Red fluorescent protein, beta-galactosidase, or luciferase.

41. (Withdrawn and Previously Presented) The isolated nucleic acid molecule of claim 30, further comprising an insertion of a nucleic acid sequence encoding a suicide gene.

42. (Currently Amended) The isolated nucleic acid molecule of claim 30, further comprising an insertion of a nucleic acid sequence encoding a ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV) G stem polypeptide.

43. (Cancelled) The isolated nucleic acid molecule of claim 30, wherein said Rhabdoviral genome is a vesicular stomatitis virus (VSV) genome.

44. (Original) A vector comprising the isolated nucleic acid molecule of claim 30.

45. (Currently amended) A recombinant ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV) comprising a nucleic acid encoding a ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV) genome wherein said ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV) genome ~~comprises~~ consists of a deletion ~~or a mutation~~ within a region encoding amino acid residues 440-449, or 449-462 of the membrane-proximal ectodomain of a ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV) glycoprotein (G protein).

46. (Withdrawn and currently amended) A [[The]] recombinant ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV)~~of claim 45 comprising a~~

nucleic acid encoding a ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV) genome wherein said ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV) genome comprises a mutation within the membrane-proximal ectodomain of a ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV) glycoprotein (G protein), wherein said mutation encodes for the substitution of:

(i) An alanine amino acid residue for a tryptophan amino acid residue at amino acid positions 457 or 461;[[.]]

(ii) An alanine amino acid residue for a glutamic acid at amino acid position 452, glycine and/or phenylalanine at amino acid position 458 amino acid residue; or

(iii) Aspartic acid and alanine amino acid residues for a glutamic acid, glycine at amino acid positions 456 or 457 or phenylalanine amino acid residue at amino acid position 458, or combinations thereof; or

(iv) Any combination of the substitutions in ~~(a)-(e)~~ (i)-(iii).

47. (Cancelled)

48. (Withdrawn and Currently Amended) ~~The recombinant Rhabdovirus of 45,~~ A recombinant ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV) comprising a nucleic acid encoding a ~~Rhabdoviral~~ Vesicular Stomatitis Virus (VSV) genome wherein said ~~Rhabdoviral~~Vesicular Stomatitis Virus (VSV) genome comprises ~~a deletion or~~ a mutation within a region encoding amino acid residues 440-462 of the membrane-proximal ectodomain of a ~~Rhabdoviral~~Vesicular Stomatitis Virus (VSV) glycoprotein (G protein), wherein said mutation is an insertion of the nucleotides encoding for the amino acid residues 311-319 of decay acceleration factor (DAF), inserted

between serine amino acid residues of the ~~Rhabdoviral~~Vesicular Stomatitis Virus (VSV) glycoprotein membrane proximal ectodomain.

49. (Currently Amended) The recombinant ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV) of claim 45, further comprising an insertion of a heterologous nucleic acid sequence encoding a polypeptide.

50. (Currently Amended) The recombinant ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV) of claim 49, wherein said polypeptide is a therapeutic polypeptide.

51. (Withdrawn and Currently Amended) The recombinant ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV) of claim 49, wherein said polypeptide is immunogenic.

52. (Withdrawn and Currently Amended) The recombinant ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV) of 45, further comprising an insertion of a heterologous nucleic acid sequence encoding a marker polypeptide.

53. (Withdrawn and Currently Amended) The recombinant ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV) of claim 52, wherein said marker polypeptide is green fluorescent protein (GFP), secreted alkaline phosphotase, DS-Red fluorescent protein, beta-galactosidase, or luciferase.

54. (Withdrawn and Currently Amended) The recombinant ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV) of claim 45, further comprising an insertion of a heterologous nucleic acid sequence encoding a suicide gene.

55. (Withdrawn and Currently Amended) The recombinant ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV) of claim 45, further comprising an insertion of a heterologous nucleic acid sequence encoding a cytokine gene.

56. (Withdrawn and Currently Amended) The recombinant ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV) of claim 55, wherein said cytokine is interleukin 2, interleukin 4, interleukin 12 or interferon-γ.

57. (Currently Amended) The recombinant ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV) of claim 45, further comprising a deletion or a mutation within the region encoding a matrix (M) protein.

58. (Currently Amended) The recombinant ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV) of claim 57, wherein said deletion or mutation is in a region encoding the N-terminal portion of said matrix protein.

59. (Currently Amended) The recombinant ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV) of claim 58, wherein said deletion or mutation is in the region encoding a nuclear localization sequence (NLS).

60. (Currently Amended) The recombinant ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV) of claim 45, further comprising a regulatory element.

61. (Cancelled)

62. (Currently Amended) A vaccine comprising the recombinant ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV) of claim 45.

63. (Currently Amended) The recombinant ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV) of claim 45, wherein said ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV) genome is a ~~vesicular stomatitis virus~~ Vesicular Stomatitis Virus (VSV) genome.

64. (Withdrawn and Currently Amended) A method of producing a recombinant ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV) comprising a genetically modified nucleic acid encoding ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV) proteins including a deletion or a mutation within

the membrane-proximal ectodomain of a glycoprotein (G) comprising the steps of: (A) inserting into a suitable cell a polynucleotide sequence encoding ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV) proteins including a deletion or a mutation within the membrane-proximal ectodomain of the glycoprotein (G), a polynucleotide sequence encoding a marker polypeptide and a polycistronic cDNA comprising at least the 3' and 5' ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV) leader and trailer regions containing the cis acting signals for ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV) replication; (B) culturing the cell under conditions that permit production of the recombinant ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV), and (C) isolating said recombinant Rhabdovirus.

65. (Withdrawn and Previously Presented) The method of claim 64, further comprising the step of inserting a heterologous nucleic acid sequence encoding a second polypeptide into said cell.

66. (Withdrawn and Previously Presented) The method of claim 64, wherein said second polypeptide is a therapeutic polypeptide.

67. (Withdrawn and Previously Presented) The method of 64, wherein said second polypeptide is immunogenic.

68. (Withdrawn and Currently Amended) The method of claim 64, further comprising the step of isolating genomic RNA from said isolated non-cytopathic recombinant ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV).

69. (Withdrawn and Previously Presented) The method of claim 68, wherein said step of isolating genomic RNA is performed by using RT-PCR.

70. (Withdrawn and Previously Presented) The method of claim 64, wherein said suitable cell, being selected from the group consisting of rodent, primate and human cells.

71. (Withdrawn and Currently Amended) The method of claim 64, wherein said mutation of the membrane-proximal ectodomain of the glycoprotein (G) encodes for the substitution of:

(a) An alanine amino acid residue for a tryptophan amino acid residue at amino acid positions 457 or 461;|| .||

(b) An alanine amino acid residue for a glutamic acid at amino acid position 452, glycine and/or phenylalanine at amino acid position 458 amino acid residue; or

(c) Aspartic acid and alanine amino acid residues for a glutamic acid, glycine at amino acid positions 456 or 457 or phenylalanine amino acid residue at amino acid position 458, or combinations thereof; or

(d) Any combination of the substitutions in (a)-(c).

72. (Cancelled)

73. (Withdrawn and Currently Amended) The method of claim 64, wherein said mutation is an insertion of the nucleotides encoding for the amino acid residues 311-319 of decay acceleration factor (DAF) inserted between serine amino acid residues of the ~~Rhabdoviral~~Vesicular Stomatitis Virus (VSV) glycoprotein membrane proximal ectodomain.

74. (Cancelled)

75. (Currently Amended) An isolated nucleic acid molecule comprising a polynucleotide sequence encoding a genome of a ~~Rhabdovirus~~Vesicular

Stomatitis Virus (VSV), said polynucleotide sequence having a deletion or a mutation in a polynucleotide encoding the membrane-proximal ectodomain of the glycoprotein (G).

76. (Withdrawn and Currently Amended) The isolated nucleic acid molecule of claim 75, wherein said mutation of the membrane-proximal ectodomain of the glycoprotein (G), comprises substitution of:

(a) An alanine amino acid residue for a tryptophan amino acid residue at amino acid positions 457 or 461;[[.]]

(b) An alanine amino acid residue for a glutamic acid at amino acid position 452, glycine and/or phenylalanine at amino acid position 458 amino acid residue; or

(c) Aspartic acid and alanine amino acid residues for a glutamic acid, glycine at amino acid positions 456 or 457 or phenylalanine amino acid residue at amino acid position 458, or combinations thereof; or

(d) Any combination of the substitutions in (a)-(c).

77. (Currently Amended) The isolated nucleic acid molecule of claim 75, wherein said deletion comprises:

(a) nucleotides encoding for the amino acid residues 449-461 of the membrane-proximal ectodomain of the ~~Rhabdoviral~~Vesicular Stomatitis Virus (VSV) glycoprotein, or a fragment thereof; or

(b) nucleotides encoding for the amino acid residues 440-449 of the membrane-proximal ectodomain of the ~~Rhabdoviral~~Vesicular Stomatitis Virus (VSV) glycoprotein, or a fragment thereof.

78. (Withdrawn and Currently Amended) The isolated nucleic acid molecule of claim 75, wherein said mutation is an insertion of the nucleotides encoding for the amino acid residues 311-319 of decay acceleration factor (DAF) inserted between serine amino acid residues of the ~~Rhabdoviral~~Vesicular Stomatitis Virus (VSV) glycoprotein membrane proximal ectodomain.

79. (Currently Amended) The isolated nucleic acid molecule of claim 75, wherein said genome of a ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV) further comprises a deletion or a mutation within a region encoding a matrix (M) protein, wherein said M protein deletion or mutation results in a non-cytopathic ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV).

80. (Previously Presented) The isolated nucleic acid molecule of claim 79, wherein said deletion or mutation is in a region encoding the N-terminal portion of said matrix protein.

81. (Original) The isolated nucleic acid molecule of claim 80, wherein said deletion or mutation is in a region encoding nuclear localization sequence (NLS).

82. (Previously Presented) The isolated nucleic acid molecule of claim 81, wherein said mutation encodes for the substitution of:

    (a) An alanine amino acid residue for a methionine amino acid residue, at position 33 or 51 of the Rhabdovirus matrix protein; or

    (b) A glycine amino acid residue for a serine amino acid residue, at position 226 of the Rhabdovirus matrix protein.

83. (Original) The isolated nucleic acid molecule of claim 75, further comprising a regulatory element.

84. (Previously Presented) The isolated nucleic acid molecule of claim 75, further comprising an insertion of a heterologous nucleic acid sequence encoding a polypeptide.

85. (Previously Presented) The isolated nucleic acid molecule of claim 84, wherein said polypeptide is a therapeutic polypeptide or is immunogenic.

86. (Withdrawn) The isolated nucleic acid molecule of claim 75, further comprising an insertion of a heterologous nucleic acid sequence encoding a marker polypeptide.

87. (Withdrawn) The isolated nucleic acid molecule of claim 86, wherein said marker polypeptide is green fluorescent protein, secreted alkaline phosphotase, DS-Red fluorescent protein, beta-galactosidase, or luciferase.

88. (Withdrawn) The isolated nucleic acid molecule of claim 75, further comprising an insertion of a nucleic acid sequence encoding a suicide gene.

89. (Previously Presented) The isolated nucleic acid molecule of claim 75, further comprising an insertion of a nucleic acid sequence encoding a fusion facilitating polypeptide or an antireceptor.

90. (Cancelled) The isolated nucleic acid molecule of claim 75, wherein said Rhabdoviral genome is a vesicular stomatitis virus (VSV) genome.

91. (Original) A vector comprising the isolated nucleic acid molecule of claim 75.

92. (Withdrawn and Currently Amended) A method for treating a subject suffering from a disease associated with a defective gene comprising the step of administering to a target cell of said subject a therapeutically effective amount of a recombinant non-cytopathic ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV), wherein the genome of said ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV)includes a deletion or a mutation within a region encoding a

matrix protein (M) and/or a heterologous gene capable of being expressed inside the target cell, thereby treating the disease.

93. (Withdrawn) The method of claim 92, wherein said target cell is an epithelial cell, a lung cell, a kidney cell, a liver cell, an astrocyte, an immune cell, a glial cell, a prostate cell, or alpha, beta or delta cells of pancreatic islet, or acinar cells.

94. (Withdrawn and Currently Amended) A method for immunizing a subject against a disease comprising the step of contacting a target cell of said subject with a therapeutically effective amount of a recombinant virus, wherein the virus comprises a ~~Rhabdoviral~~Vesicular Stomatitis Virus (VSV) genome, or fragment thereof, said ~~Rhabdoviral~~Vesicular Stomatitis Virus (VSV) genome or fragment thereof including a deletion or a mutation within a region encoding a matrix (M) protein~~, and/or a deletion or a mutation within a region encoding the membrane-proximal ectodomain of a glycoprotein (G protein)~~ and a heterologous gene encoding an immunogenic protein, or peptide fragment, capable of being expressed inside the target cell, thereby immunizing against a disease.

95. (Withdrawn) The method of claim 94, wherein said target cell is an epithelial cell, a lung cell, a kidney cell, a liver cell, an astrocyte, a glial cell, a prostate cell, a professional antigen presenting cell, a lymphocyte or an M cell.

96. (Withdrawn and Currently Amended) A method for treating a subject suffering from a disease comprising the step of contacting a target cell of said subject with a therapeutically effective amount of a recombinant virus, wherein the virus comprises a ~~Rhabdoviral~~Vesicular Stomatitis Virus (VSV) genome, or fragment thereof, said ~~Rhabdoviral~~Vesicular Stomatitis Virus (VSV) genome or fragment thereof including a deletion or a mutation within

a region encoding a matrix (M) protein ~~and/or a deletion or a mutation within a region encoding the membrane proximal ectodomain of a glycoprotein (G protein)~~ and a heterologous gene encoding an immunogenic protein or peptide fragment, capable of being expressed inside the target cell, thereby treating a disease.

97. (Withdrawn) The method of claim 96, wherein said target cell is an epithelial cell, a lung cell, a kidney cell, a liver cell, an astrocyte, a glial cell, a prostate cell, a professional antigen presenting cell, a lymphocyte or an M cell.

98. (Withdrawn and Currently Amended) A method for treating a subject suffering from a disease associated with a defective gene comprising the step of contacting a target cell of said subject with a therapeutically effective amount of a recombinant virus, wherein the virus comprises a ~~Rhabdoviral~~Vesicular Stomatitis Virus (VSV) genome, or fragment thereof, said ~~Rhabdoviral~~Vesicular Stomatitis Virus (VSV) genome or fragment thereof including a deletion or a mutation within a region encoding a matrix (M) protein ~~and/or a deletion or a mutation within a region encoding the membrane proximal ectodomain of a glycoprotein (G protein)~~ and a heterologous gene capable of being expressed inside the target cell, thereby treating the disease.

99. (Withdrawn) The method of claim 98, wherein said target cell is an epithelial cell, a lung cell, a kidney cell, a liver cell, an astrocyte, a glial cell or a prostate cell.

100. (Withdrawn and Currently Amended) A method for cancer cell lysis, comprising the steps of contacting a cancerous cell with a recombinant ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV), wherein said ~~Rhabdovirus~~Vesicular Stomatitis Virus (VSV) comprises (a) a nucleic acid

comprising a ~~Rhabdoviral~~Vesicular Stomatitis Virus (VSV) genome, or fragment thereof, wherein said ~~Rhabdoviral~~Vesicular Stomatitis Virus (VSV) genome or fragment thereof comprises a deletion or a mutation within a region encoding a matrix (M) protein ~~and/or a deletion or a mutation within a region encoding the membrane proximal ectodomain of a Rhabdoviral glycoprotein (G protein)~~; and (b) a non-~~Rhabdoviral~~Vesicular Stomatitis Virus (VSV) nucleic acid.

101. (Withdrawn and Currently Amended) The method of claim 100, wherein said non-~~Rhabdoviral~~Vesicular Stomatitis Virus (VSV) nucleic acid encodes for a cytokine or suicide gene.

102. (Withdrawn and Currently Amended) A method for treating cancer, comprising the steps of contacting a cancerous cell with a recombinant virus, wherein said virus comprises (a) a nucleic acid comprising a ~~Rhabdoviral~~Vesicular Stomatitis Virus (VSV) genome, or fragment thereof, said ~~Rhabdoviral~~Vesicular Stomatitis Virus (VSV) genome or fragment thereof comprises a deletion or a mutation within a region encoding a matrix (M) protein ~~and/or a deletion or a mutation within a region encoding the membrane proximal ectodomain of a glycoprotein (G protein)~~; and (b) a non-~~Rhabdoviral~~Vesicular Stomatitis Virus (VSV) nucleic acid.

103. (Withdrawn and Currently Amended) The method of claim 102, wherein said non-~~Rhabdoviral~~Vesicular Stomatitis Virus (VSV) nucleic acid encodes for a cytokine or suicide gene.

104. (Withdrawn) A method for identifying an agent that has oncolytic activity, comprising the steps of: obtaining vibrotome slices of corona, substantia negra and cortex tissue, culturing said slices on coverslips under conditions maintaining viability and inhibiting mitosis, inoculating said slice culture with

labeled cancer cells, culturing said inoculated culture with a candidate agent, and determining cancer cell viability, wherein a decrease in cancer cell viability indicates that the candidate agent is oncolytic, thereby identifying an agent that has oncolytic activity.

105. (Withdrawn) The method of claim 104, wherein said cancerous cells are of neuronal origin.

106. (Withdrawn) The method of claim 105, wherein said neuronal origin cancerous cells are glioma cells.

107. (Withdrawn) The method of claim 104, wherein said cancerous cells are labeled with a fluorescent, luminescent, chromogenic or electron dense label.

108. (Withdrawn) The method of claim 104, further comprising the step of inoculating said slice culture with labeled recombinant Rhabdovirus.

109. (Withdrawn) The method of claim 104, further comprising the step of culturing said inoculated slice culture with a cytokine.

110. (Withdrawn) The method of claim 109, wherein said cytokine is an interferon.

111. (Withdrawn) The method of claim 104, wherein culturing said slices on coverslips under conditions maintaining viability is in a medium comprising Gey's/dextrose solution, plasma, thrombin, Eagle's basal medium, Hanks' balanced salt solution, L-glutamine, or any combination thereof.

112. (Withdrawn) The method of claim 104, wherein culturing said slices on coverslips under conditions inhibiting mitosis is in a medium comprising cytosine-α-D-arabinofuranoside, uridine, 5-fluro-2'-deoxyuridine, Gey's/dextrose solution, plasma, thrombin, Eagle's basal medium, Hanks' balanced salt solution, L-glutamine or any combination thereof.